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EDUCATIONAL NEEDS.

PROF. HALL.

As the first principle to be observed in the education of children, I would place hygiene; and, as perhaps first and most teachable of its many elements, proper muscle-culture. Few realize how dangerously near weakness often is to wickedness, how impossible healthful energy of will is without strong muscles which are its organ, or how endurance and self-control, no less than great achievement, depend on muscle-habits. Nearly one-half of the body is made of contractile tissue, controllable by the will; and it is because the brain is developed, while the muscles are allowed to grow flabby and atrophied, that the deplored chasm between knowing and doing is so often fatal to the effectiveness of mental and moral culture. The great increase of city and sedentary life has been far too sudden for the human body—which was developed by hunting, war, agriculture, and manifold industries now given over to steam and machinery—to adapt itself healthfully or naturally to its new environment. Let any of us take down an anatomical chart of the human muscles, and reflect what movements we habitually make each day, and realize how disproportionately our activities are distributed compared with the size or importance of the muscles, and how greatly modern specialization of work has deformed our bodies. The muscles that move the scribbling pen are an insignificant fraction of those in the whole body, and those that wag the tongue and adjust the larynx are also comparatively few and small. Their importance is, of course, not underrated, but it is disastrous to concentrate education upon them too exclusively or too early in life. The trouble is that few realize what physical vigor is in man or woman. Both in Germany and Greece a golden age of letters was preceded, by about a generation, by a golden age of national gymnastic enthusiasm which constitutes, especially in the former

country, one of the most unique and suggestive chapters in the history of pedagogy. Symmetry and grace, hardihood and courage, the power to do everything that the human body can do with and without all conceivable apparatus, instruments, and even tools, are culture-ideals that in Greece, Rome, and Germany respectively have influenced, as they might again influence, young men as intellectual ideals never can do save in a select few. We do not want "will-virtuosos," who perform feats hard to learn, but then easy to do and good for show; nor spurtiness of any sort which develops an erethitic habit of work, temper, and circulation, and is favored by some of our popular sports, but too soon reacts into fatigue. Physical training does not reach its end till it leads the young up to taking an intelligent, and serious, and life-long interest in their own physical culture and development. This is higher than interest in success in school or college sports; and, though naturally later than these, is the earliest form of self-culture in which it is safe and wise to attempt to interest the young for its own sake alone.

A great need for children of wealthy parents is often more exposure, lower temperature in the nursery and less heating coverings when playing out-of-doors, colder baths, etc. Exposure to cold and heat in their season is the only "gymnastics for the unstriped muscles." Excess is dangerous, but so is defect; and when I see, as I often have, children playing kindergarten games in hot rooms, to suit the teacher's sluggish pulses, and remember Fröbel's dictum, "The child is a plant and should live out of doors," the fear is deepened that, to the more distinctively American causes of physical decline (manifest not in the growth and stature of adolescents, but in the absence of staying quality later), such as excitement, overwork, the comparative lack of national sports and games, military service, recreative habits and physical ideals generally, together with a peculiar and exceedingly trying climate, in which the experiment of civilization has never before been made, school-life instead of being corrective sometimes adds another cause, far more serious than those of short-sightedness, spinal curvature, or even color-blindness, important though these may be. "How many of your boys have graduated sound in health to their teeth?" I lately asked the masters of six city grammar schools. Their replies have all ranged between three and fifteen per cent. Though good health is more often said to prevail by both teacher and

pupil, I doubt, from the sallow languor, the anxious, nervous, worrying tone so generally seen in the faces of our brain-worked girls in high and normal schools, if the case is much better there. A four hours' nooning for all primary children with but four hours' school, beginning at eight, and large central halls with movable apparatus, where classes of both sexes, of grammar-school grades at least, should be required to exercise in turn under teachers two hours or less per week, keeping the gymnasium full, and teachers there busied all day as the different classes march to and from it and their schools,—these devices, as in some German cities, would be a great improvement. Progress not great or striking, but in the right direction, has begun here; and the ways and means, on which all depends in education, of doing better than we are doing, are within the reach of teachers who seriously seek them.

Secondly, we must study and follow the child's nature as it actually is. Every step forward in methods since Comenius has resulted from a deeper insight into children's psychic growth and activity. Pestalozzi and Fröbel followed their pupils in their sports by day and to their beds at night, regarding nothing too trivial or too sentimental; studying toys, games, seeking inventories of every object or impression which interested them; lying in wait for their secrets; angling for their confidences; experimenting on them with stories, riddles, songs, and proverbs; and exploring the lines of least resistance into their minds for each element of instruction. Learned and able men, whom universities had honored, devoted themselves to primary teaching, protesting that any one who did not learn far more from the children than he could ever hope to impart to them was not fit to teach. Most of us regard children, even our own, whom we have seen daily for years, in the light of traditional ideas, sentiments, mental categories, etc., commonly ascribed to or implied in them in our juvenile literature and art, and philosophies of mind. The divine instinct of the mother, if not specially instructed, meets little more than physical needs. The few dozen impressions of our own childhood before eight, or even ten or twelve years, are corrupted with what others have told us of our childhood,—with dreams mistaken for realities in the lapse of time,—and are like the filmy tracing of the long decayed seed-acorn of a ten-year old oak tree I lately saw after a land-slide. Knowledge of childhood from memory of our own is as defective as a knowledge of acorns from such traces alone would be.

Individual and untaught tact, intuition, and sympathy have been mainly depended on for a knowledge of the child's soul; and without these no method can be worked. But they only reveal the possibility of something far better. These qualities are apt to be restricted in their field, and to die out after secreting a few dogmas or working out a new rut, while any really high and adequate degree of either is as rare as genius. This, indeed, is felt; and hence those many abstract schematisms of mind (according to Hamilton, Hegel, and many others less known), so often called in to take their place—schemes resembling the adult mind, indeed, but only as a manikin resembles a living body, If one would know physiology, we send him to the laboratory, and put the instruments and the living tissues before him, and do not send him to Galen or Haller, or even to Ludwig's or Hermann's books till later. But a normal-school pupil, who wishes to practice on the juvenile mind, is often given an outline of mental philosophy from a past generation, if not century, and practices teaching mainly on his or her classmates, who act the roles of young children, even to whispering, giggling, etc. The worst result of this method-cram, by which so much time is lost, is that pupils graduate with only the most scanty knowledge of the subjects taught, and with a method behind which they would feel quite confident of concealing their deficiencies in undertaking to teach, as one lately boasted to me he could, anything to any class, at half an hour's notice. They work at and nag their classes till they get or "develop" what is wanted, the pupils learning less often to trace natural order in natural ways, than to catch unconscious hints and suggestions of the word or thought wanted, by a process of mind-reading so subtle that the teacher thinks it a triumph of his method. This is true of far too many of our otherwise excellent normal schools. What we want is careful inventories of what children of successive ages may be safely assumed to know; what they can do; what sets of impressions their minds are busied with most and least hours per day; classifications of common errors in articulation; in understanding the natural objects about them; in the meaning of words; which senses are most teachable; what tastes, beliefs, habits, etc., are common to children and primitive man; the influence of sex, age, and nationality; how the religious, social, and moral instincts grow; when each successive interest may be assumed to be at its height and most available in instruction; how children feel toward pets and toward each other; when does

animism toward flowers, dolls, stars, etc., cease. These, and very many more problems of this sort,—surely no less important than the study of butterflies or the instincts of ants, and surely less complex than the adult mind, for which many widely admitted schemes have been laboriously wrought out,—are now, thanks to the many methods which many sciences have lately brought to bear on psychophysics, ripe for study. How does nature teach and learn, is now our problem.

Thirdly, moral training is needed. Religious instruction, as now given, is neither universal nor pedagogic enough; and virtue has never yet been effectively taught from ethical text-books. Morality is training far more than instruction, and all teaching that passes through the intellect, and affects the will and emotions, has a moral character. So far as the pupils can not only know, but do what is taught, so far as possession ripens into faculty,—whenever any element of memorized, worded, theoretical, or bookish, or passively received, knowledge is made practical, experimental, or industrial,—there is moral gain. On the other hand, wherever the bulk, rather than the degree of assimilation, is measured by examinations, etc.; wherever a curriculum of shreds and patches of many sciences is followed; where the conceit of comprehensiveness, as expressed in seemingly learned abstract allusions, as often in text-books in history and literature, as well as in school compositions, is tolerated; wherever good precepts are allowed to remain peacefully beside bad and discordant habits,—moral weakness is directly cultivated. Yet the moral problem is more commonly what, than how, to teach. The moral value of teaching is, all agree, great; as is also that of the contents of the school reading-books; and we must scrutinize the effect of each historic period and each poetic selection, the character of school music, etc., in our teachers' meetings. This is a higher and larger and later question than how these should be taught. How compactly and spontaneously do the elements of each topic shoot together during that long and epochful adolescent age, when brain-growth seems to concentrate on the "association fibers" which bind the cell-groups of adjacent centers together. With all these and many more open psychic and ethical questions, many of which are more or less ripe for research, one of our greatest needs is an institution where the best educational books which have appeared during the last century can be consulted, and where

schools and children can be systematically observed in the light of what has been done in our own country and in Europe. While other departments of science, far more extensive, are equipped at a dozen centers, there is at present not one man in this country devoting himself to the studies of education with anything like proper facilities, to say nothing of the proper qualifications for such work; and that, too, in a time of educational awakening, deeper and more general than any this country has ever witnessed.

Fourthly, and not to be separated from the principles of teaching, is the need of greater competence and a more professional spirit among teachers. The only way to secure this,—as it seems to the writer,—is more department-teaching. The music-teacher is already more or less professional, and goes from school to school, and teaches only music. Why should not the teacher of arithmetic, reading, geography, etc., be allowed to teach only these studies in several schools, and qualify and pass his examination for higher and higher classes? This method has been very successful in Europe, and would have certain peculiar advantages here. One who has taught geography or mental arithmetic only for ten or twenty years will be sure, if he has energy, to give his work a more professional character in many ways than if he must teach a dozen subjects. Some of the best German professors rose from this work, and the system cannot fail to bring higher and secondary education into closer relation. This system, which must not be carried too far, is one cause of the excellence of the German schools, and of the thorough character of discussions in their teachers' meetings. The effect of a not too frequent change of instructors is stimulating on the children, and a healthful spirit of emulation between the teachers, and sometimes even between gymnasium and university work, results. Complaint of overwork is often heard; but it is often our teachers and their methods that make things hard. If a teacher is full of his subject, and can induce enthusiasm in his pupils; if his facts are concrete and naturally connected, the amount of material that an average child can assimilate without injury is as astonishing as is the little that will fag him if it is a trifle above or below or remote from him, or taught dully or incoherently.

Finally, examinations should come in the cooler months, as is so common in Germany, and not in June, when, with many,

physical relaxation is at its greatest. At our present examination season, or earlier, the nervous systems of even the animals we experiment upon in physiological laboratories have so much less vigor as to be unserviceable for certain scientific purposes. Even if fresh, cool air do not actually increase arterial tonicity, and send the blood inward to strengthen the vital centers, the winter is nature's season for indoor and bookish work, while June days bring languor and give a fresh attraction to out-of-doors that comports ill with the culmination of the mental efforts of a year.

G. STANLEY HALL.

PROFESSOR ADLER.

THE public are growing uneasy. It is feared that the brains of our little ones are overworked in the schools. Physical deterioration is the inevitable penalty of such overwork.

I would suggest, in the first place, that a commission be appointed to visit the schools, and determine how far the evil may be exaggerated—how far it exists. If it is possible to obtain tolerably accurate statistics, why should we depend upon vague conjectures and letters in the newspapers? But assuming, as we have reason to do, that there is ground for complaint, is it logical to cry out against the number of studies attempted in the schools? Might it not be wiser to seek the fault in the method rather than in the matter of instruction? Do we find that the amount of knowledge imparted to the pupils is out of proportion to the faculties of young children, or greater than is actually assimilated in the best private schools of this country and Europe without detriment? If this is not the case, we are led to infer that the cause of the evil is largely in the worry, waste, and tedium which result from bad methods. The children are mentally burdened; hence it follows that they must be more or less physically affected.

Without entering into a discussion of methods, the following points may be suggested: Let not the development of the memory be exaggerated at the expense of the understanding. Let the wholesale system of teaching be abandoned. Let the size of the classes be reduced, so that greater respect can be paid to the individuality of the pupils. Above all, let us have teachers who

are themselves trained in rational methods. Give us the right sort of teachers, and our chief difficulties will immediately disappear.

Judging from the utterances that we often hear, the presumption in many men's minds seems to be that the acquisition of knowledge is a hardship for the young; but what more damning accusation can be brought against the prevailing system of teaching than the fact that such ideas should become current? Who that has observed children has not seen how eager they are for knowledge, what numberless questions they delight in asking, and with what freshness and eagerness their young minds seize upon the facts of the world? If, then, the instruction of the school wearies and repels them, we must not suppose that the intellectual pabulum itself is distasteful, but that there is something in the condiment with which it is seasoned, or in the manner in which it is served, that causes so unnatural a repulsion. The great fact to be borne in mind is that instruction becomes interesting as soon as the self-active reason of the pupil is appealed to, and he is taught to reach results by the exertion of his own thought, instead of receiving a bundle of facts, ready made, from the hand of the instructor. There is absolutely no lesson—not the dry arithmetic lesson, not the reading lesson, not the history and geography lesson—that will fail to become fascinating and delightful to the pupils, if the instruction given be fully saturated with the rational method. The children will then take in knowledge as a hungry person takes in food, as one who is thirsty drinks water from a clear spring.

But there are especially two points to which I desire to call attention. It is well known that, in changing from one kind of physical exercise to another, we experience a sense of relief which is often preferable to entire rest. The same is true of mental exercise, as every student knows. Why not apply this principle to the teaching of the young? If our pupils complain of overwork, this must be due in part to the fact that there is not sufficient alternation in their daily tasks. An excellent means of obviating this difficulty would be to introduce technical instruction and art-modeling into the schools. In the school workshops the pupils would obtain a gymnastic of the eye and hand, practical knowledge of mathematics, refinement of the taste, a new species of moral influence, physical invigoration,

and a welcome change from the purely intellectual part of their instruction. If the hours spent in the workshop are properly intercalated between those spent in the class-room, the pupils will pass with joyous spirits from one to the other; they will do more and better work in both departments than is now accomplished in one alone, and their mental freshness will remain unimpaired throughout the day. The additional charge which the introduction of this system would involve—and this appears to be one of the chief objections urged against it—is in reality by no means so considerable as is commonly supposed. The material used in the school workshop is of the most inexpensive kind. The tools are simple and easily managed, and the graduates of normal colleges, if adequately trained and under proper supervision, ought to be able to impart this instruction without further charge upon the community.*

The second point to which I would refer is, that technical education and art-modeling in the schools would be a means of testing the ability of the pupils in a new direction. The introduction of industrial education into the schools is often urged as a means of fitting the children of the poorer class for their future station, and enabling them to gain higher wages later on. If placed on this ground solely, it is justly resisted by the fraternity of teachers, who insist that the school shall be kept sacred to the enlightenment of the mind and the building up of character, and should not be degraded to serve “the bread and butter interests” of later life. But technical and art education in the schools ought to be advocated for educational reasons chiefly. They are as important for the children of the rich as of the poor; for those who will eventually enter the professions and the higher walks of life gen-

*The beneficial effect of alternate practical labor and mental application is admirably illustrated in the English half-time schools. The pupils of these schools are compelled by poverty to work in the factory during the greater part of the day, and only attend instruction during three hours. But experience shows that they learn as much in half time as other pupils in full time. They are quick, alert, their attention is more easily concentrated, and there is no doubt that their training in the factory has given them these advantages. We do not recommend the sending of children, even of the poorest class, into factories, where they are exposed to horribly injurious influences that more than outweigh any incidental advantage; but we can secure the benefit that arises from the alternation of practical work with abstract study by introducing the school workshops.

erally, as for those who will follow the humblest trade. This educational value must be kept in view. It is because hand and eye education are a new means of brain education, that we are justified in recommending their inclusion in the curriculum of the schools. Instead, therefore, of diminishing the number of studies, we ought rather to increase them. Not in such a way, however, that all studies shall be made obligatory upon all pupils, but so that a sufficient number and variety of tests may be placed at the teacher's disposal for discovering the aptitudes of his pupils, and encouraging each one in the direction in which his individuality points. In the Workingman's School we have seen astonishing instances of young children, who seemed hopelessly inapt in all the ordinary branches of instruction, easily taking the lead in the school workshop, and excelling their companions in the accuracy, finish, and beauty of their results. Is it not true that in any of the public schools such children would have been hopelessly lost? Their repeated failures would have crushed their self-respect, and, perceiving themselves to be despised as dunces, they would have accepted the verdict of their teachers and their whole future might thus have been blighted.

How important is it, then, that we should apply a sufficient variety of tests to the aptitudes of our pupils, and rouse the talents that may be slumbering in the corners of the soul. The profession of the educator is a golden profession, not in its pecuniary recompense, perhaps, but all the more in its substantial value to the state. Let us not listen to the cry of those who would develop only certain faculties, such as can be turned to account in money-getting, and leave undeveloped the total humanity of the children. In dealing with the latter generously, we are but fulfilling the duty which one generation owes to the next; in building them up intellectually, æsthetically, and morally, we are truly building the future of the republic.

In conclusion, since the question of the schools has come before the public, I would add a word concerning the management of our public school system in general. Of what avail, we ask ourselves, are such suggestions as the above, and much wiser ones that may be brought forward by others, unless there is some means of giving effect to what is suggested? The Board of Education, in whose hands is the control of our public schools, fills an indispensable office in watching over the admin-

istration of the school funds, in planning and superintending the erection of new buildings, and in caring for the well-being of the schools generally; and the fact that men of high social standing and responsibility devote themselves to this duty is a most gratifying one, for which we cannot be sufficiently thankful. But the question to which I should like to direct attention is, whether members of boards of education, as a rule, are specialists in the science of education. Are they versed in the principles of pedagogy? Have they the time to become profoundly acquainted with the results of recent research in the educational field? Can they possibly keep abreast of the best kind of educational literature that comes to us from abroad? Are they enabled to follow the course of educational experiments elsewhere, and do they conscientiously, weighing the *pros* and *cons*, decide what is applicable here and what is not? Is it not, on the contrary, true, that the very fact that these gentlemen do occupy high positions, that their time is valuable and their energies engaged in other directions, must preclude them from giving exhaustive attention to the purely theoretical matters upon which they are yet constantly called on to decide?

The question, then, which I put is, whether persons who make a specialty of the science of education—experts in education—should not be allowed to exert some influence upon the course of studies and other like matters in our schools. Far be it from me to recommend that these specialists should be allowed to legislate. The final decision, the authoritative vote, may still remain in the hands where it is at present lodged. What I propose—and does it not seem an obviously just proposition?—is that recognized students of the science of education should at least be allowed a hearing before a board of education, and should be recognized in some official way. It has been suggested by one who is competent to speak on these subjects, that it might be best to appoint a commission of educators, whose duty it should be to visit the schools annually, biennially, or even at longer periods, to inquire into existing evils, to recommend such changes in any direction as they may deem necessary, and to lay their report before the board for action. Who does not remember what an impetus to the course of reform in England was given by the Parliamentary commissions, which have from time to time reported on special subjects. If we had such commis-

sions on education, I am certain that the cause of educational reform would make rapid strides forward. Valuable hints, fruitful suggestions, would be the result of their labors. Their published reports would stir up public sentiment, and boards of education, which are now impeded in their efforts at reformation, would find themselves buoyed up and supported by a healthy and more enlightened public opinion.

What I respectfully submit is that, in the management of the public schools, an advisory commission of educators should have a voice. We allow bakers to bake our bread, and shoemakers to make our shoes; why should we not allow those who make a specialty of the science of education to give us at least their advice in regard to the education of our children.

FELIX ADLER.

PRESIDENT HUNTER.

A GREAT deal has been said of late, in the newspapers and elsewhere, about overwork by the pupils of the public schools. If half that has been asserted be true, it is high time that the remedy should be applied: for any education at the cost of permanent ill-health is too dearly purchased. John Stuart Mill's definition of education is general and comprehensive, and includes physical as well as moral and intellectual perfection. "Education," he says, "includes whatever we do for ourselves, and whatever is done for us by others, for the purpose of bringing us nearer the perfection of our nature." Any system of education that disregards the health of the children is faulty; and, if it injure their health by overwork, it is criminal. The trite aphorism, *Mens sana in corpore sano*, should be the motto of every conscientious teacher and every educational system.

Overwork in the public schools may arise from several causes. First, from the folly of teachers in making the lessons to be studied at home too long; secondly, from the neglect of teachers to thoroughly explain the lessons at the time they are assigned for home study; thirdly, from unwisely establishing a course of study for the schools which must, of necessity, press heavily on pupils and teachers; and, fourthly, from creating and fostering a spirit of unwholesome competition, which drives

pupils and teachers to work for high marks at examination. In addition to these principal causes, several minor ones might be mentioned: the inability of some pupils to study at all, because they have never been taught how to study; the lack of all decent facilities for home study by the children residing in the poorer apartment-houses; and the imperfect classification of the pupils, which, perhaps, entails the greatest evils of all—to wit, worry, terror, and overwork. The pupils placed above their proper grades struggle with their studies as weak swimmers struggle with a stormy sea.

It is no easy task, however, to regulate the work for and in the schools so as to prevent indolence on the one hand, and overwork on the other. The road to learning may be made so smooth and pleasant as to weaken mental activity, or so rough and disagreeable as to create an abhorrence of books and studies. If over-instructed, the pupils may become mere passive recipients of knowledge; and if under-instructed, they may waste their time in futile efforts and worry themselves into ill-health. Recurring to Mill's definition, "Whatever we can do for ourselves," falls under the head of home-study; and, "Whatever is done for us by others," falls under the head of instruction in school. The nice balance of these two will make an almost perfect system of education. One of the rules of good teaching is, "Never tell a child anything that he can discover for himself." Of course, there are reasonable limits and exceptions to this rule. It should not be forgotten that a set "task" exercises an admirable moral influence on a child's mind. Every time that a boy lays aside his top, or the girl her doll, for the purpose of learning to-morrow's lesson, there is in this simple act of giving up a pleasure to perform a duty an education of the will which is vastly more important to the future welfare of the child than the little learning acquired from the school-book. The child may fail next day to recite the lesson. But what of that? An act of self-denial was performed, and a proper effort was made. Even in the poorest quarters of great cities, simple tasks should be assigned for home-work. The child should be trained to self-reliance and self-help, and hence he should be required to do something by his own unaided efforts. Study at home, however, should never be required until the child has reached his tenth or eleventh year. Up to this age he should study in school under the supervision and guidance of his

teacher, and the school time should be divided, as nearly as possible, into three equal parts—one-third for study, one-third for recitation and instruction, and the remaining third for recreation and physical exercise.

But it is of the first importance that a child should be instructed how to study. The question then becomes, When and how should study be commenced? It would be absurd to begin before the child had learned to read in a simple reader of the third or fourth primary grade. The methods of teaching reading in vogue in some places are utterly ridiculous and stupid. The children's minds are occupied in "minding their stops"; in looking out for commas, semi-colons, and periods; in keeping their voices up at some of these points, and in letting them fall at others; while all the time the book may be imperfectly punctuated. By this method the children gain no proper understanding of the subject-matter of the book, but, on the contrary, acquire a "sing-song" style of reading which is anything but agreeable to the listener. This is the elocutionary reading of many schools. What is the main object of the great majority of the people in learning to read? Is it not to receive information? How many of them are ever asked to read aloud after they leave school? How many of them ever become orators? The ability to receive knowledge by silent reading is of the utmost importance—of prime necessity—and this silent reading furnishes the very best means to enable the teacher to instruct the pupils how to study. The teacher should give the children of the primary and lower grammar grades, at least ten minutes for the silent reading of a lesson in the class reading-book; at the expiration of this time the teacher should request the children to mention any words whose meanings they did not know. If any are mentioned, the definitions should be given, if possible, by members of the class; but, in case of failure on the part of the children to do so, the correct meanings should be clearly and concisely stated by the teacher. The children should then close their books, and tell the story in their own words; the errors and omissions should be pointed out by members of the class. The teacher should be very careful to correct all inaccuracies of speech. The habit of using good English at this early period of their lives will do more to cause the children to "speak and write with propriety" than all the English grammars ever published. By means of exercises of this kind, the

pupils' vocabulary will be increased, and their minds enlarged. When the story of the lesson has been told by the children, and the teacher has become satisfied that they understand the meanings of the words, they may then open their books and read aloud. It will be found that the reading is much more expressive, and that it contains much less of the "sing-song." When a child has once learned to receive knowledge by silent reading, it becomes a very easy matter to study geography and history in the higher grades, and, indeed, to learn all his lessons in a very short time. The habit of learning in this way, if once thoroughly acquired, would put an end to the memorizing of unmeaning words, and greatly, if not wholly, check the overwork recently complained of by some of the newspapers and a portion of the public.

Study at home should be regulated according to the social condition of the children. In the poorer localities of great cities, little dependence can be placed by the teachers of even the higher grammar grades on home-study; nevertheless, it ought not to be entirely abandoned. The children should be trained to do something for themselves by their own unaided efforts; but the work required should be small in quantity and simple in quality—assigned, as before stated, for its moral influence rather than for its intellectual value. In the wealthier localities, where the children possess the advantages of homes more or less refined, and of the insensible culture that proceeds from contact with educated parents, the lessons to be studied out of school should never require more than two hours' work even in the upper classes of the grammar grade; and if the classification has been made with care, and the previous training has been thorough, the time for home-study might well be reduced to one hour. At any rate, the first consideration with parents and teachers should be the preservation of the children's health and the prevention of overwork and worry.

Water cannot rise above its level, nor the pupil above his teacher. The great aim of every system of public instruction should be to secure the services of teachers specially trained, precisely as the members of any other profession are trained, to produce the best results in the shortest possible time. Experience has proved that a good education alone is not sufficient to make a man a good teacher. Not infrequently the best scholars are the worst teachers. The efficient teacher needs either natural

aptitude or careful training. The born teacher is as rare as the born poet. Hence the necessity for normal schools. The great and growing states of the Old World, realizing the importance of an economic system of public instruction, have established normal institutions by the thousand. In the United States there are only about two hundred normal schools to recruit the ranks of an army of three hundred thousand public-school teachers. As a matter of course, then, there must be throughout the country many incompetent teachers, men and women, whose highest idea of teaching is to "hear" lessons, previously committed to memory, parrot-fashion, from a text-book. Under such teachers there will always be overwork, worry, disgust, irritation, and, if permitted, frequent allopathic doses of rattan.

THOS. HUNTER.

DR. PUTNAM JACOBI.

My knowledge of the public schools is derived, partly from personal recollections as a pupil in one of them; partly from professional and personal intercourse with a certain number of teachers and scholars; partly from such general acquaintance with the system as is accessible to every citizen. In regard to the hygiene of the schools, I have had occasion to study it perhaps rather more in the case of the female teachers than of the pupils. The most important infractions of hygienic rules have seemed to me to affect these two classes of persons about equally. This is conspicuously true of the habit, which widely prevails among both, of passing nearly the entire day without food, or with a lunch at once unsubstantial and indigestible. The apparent inability of the female sex to comprehend any fixed relation between food and work is the cause of many of its woes. The habit of working without eating is first contracted at school, and in thousands of cases initiates the dyspepsia and frontal headache which are so readily attributed to excessive mental exertion. The old New England custom of keeping school from nine to twelve, and again from two to four, is certainly much more favorable to health than a single prolonged session from nine to three, with half an hour's intermission for the double purpose of lunch and exercise. Short periods of

work, alternating with periods of recreation, are equally essential to children and to the women who teach them. No one can enter an afternoon school-room without noticing the flushed faces and listless attitude of the pupils, and wondering on what principle, or for what reason, these young things are still chained to their desks.

School-hygiene cannot fail to be defective so long as the main object of school-life is held to be the learning a certain number of lessons. So soon as the problem of education is recognized as bearing upon the development of a dual organism in all its parts, it will no longer be considered proper to devote eight hours a day to the training of the memory, and fifteen minutes to inadequate calisthenic exercise of the muscles. The enormous massing of children in the public schools leads, furthermore, to serious infractions of public hygiene in regard to ventilation, sewer drainage, and the communication of contagious diseases. How far it is at present possible to provide adequately for all the needy children, while well-to-do parents are permitted to send their children to the public schools, seems to me a question requiring serious consideration from both the sanitarian and educational point of view. It is incredible that any real education can be afforded to the large classes now herded together under the care of one teacher. Twenty or thirty children are certainly all that a single brain can pretend to teach; but our public-school classes habitually contain sixty, eighty, and even more pupils.

The vitiation of the atmosphere of the school-room by overcrowding, the nervous strain and worry to the teacher in merely keeping such a class in order, the nervous excitement to the children from prolonged contact with one another in such masses, are all influences antagonistic to health. Another such influence of great importance for the health of both children and teachers is the system of competitive examinations for promotions. It is difficult to see what useful purpose is accomplished by this system. It is certainly rational to select, according to some standard (not necessarily the existing one), the children who have shown most capacity in the grammar schools, to be recipients of more advanced instruction. But it does not follow that children under fourteen should be urged to a pseudo-demonstration of capacity beyond their real powers. That no strain should be imposed on a growing organism is a

postulate that should be an axiom. But it is utterly and necessarily disregarded by any system which engages children in competitive strife. From this they should be steadily discouraged, and really only allowed to do what they can do easily. Effort is then more likely to be directed toward the invention of methods by which, through increased development of power, a previously difficult task may be rendered easy. The development of mental power, that may become available when the pupil deals with new facts, is quite as important as the acquisition of any one group of facts. It is evident that this requires much individualization, at present impossible, in the systematized chaos of the educational machine.

I do not think an opinion of sufficient practical value can be formed in regard to the question of overwork, by estimating the difficulty of the examination papers upon which admission to the colleges depends, and around which the education in the upper classes of the grammar schools centers. What may be perfectly easy for one child, may be immensely difficult for another, whose real capacity may nevertheless not be inferior, only he may require to have been taught in a different way. The system of examination papers, or even of oral examinations conducted by a stranger, however plausible and however proper for adults, is unsuited to children. There is no use in obtaining average or percentage estimates of their ability. Any good teacher with a class of reasonable size, could tell much better at the end of a year what children were fitted for promotion without than with these laborious percentages and cram examinations, which make such an imposing show on paper.

True, some system of control must be provided to constantly test the work performed by so many different teachers. But what is the worth of the test which consists simply in ascertaining how many children can answer the same set of questions, prescribed beforehand as a procrustean rule to which every individual in the class must be adjusted? It seems to me conceivable that the examiner should first inquire of each teacher concerning the subjects toward which attention has been directed, the particular method pursued in the special class, the varying aptitudes and tastes of the different scholars under his or her care, and that the examination should be based on the information so afforded, and thus differ in each case. It should be radically different from examination in professional studies,

which necessitates the acquisition of a certain minimum of information on prescribed topics; whereas the object here is mainly to ascertain the degree of development of the children. Reading, writing, and arithmetic once mastered, the kind of further knowledge to be acquired might vary indefinitely.

In the present system, so far as I understand, little or no scope is allowed any individual teacher for development of individual method, or talent, or originality; all tendency to invention is crushed in the mighty working of the educational machine. Not only so, but, so far as I have been able to observe, the female teachers at least become cowed into an attitude of timid submissiveness absolutely fatal to any independent judgment concerning their own work.

I have been particularly requested to give my opinion in regard to the evil effects of mental overwork. I find it extremely difficult to disentangle the element of mental strain from among the various existing conditions inimical to the health of children. In addition to those already mentioned, I suggest that the one-sidedness of an education addressed almost exclusively to the verbal memory is a serious cause of mental—*i. e.*, of nervous—strains. According to the prevailing system, not only are a large number of intellectual faculties—imagination, invention, judgment, reasoning,* perception—left without systematic training, but the senses, the first avenues of mental impressions, are disregarded altogether.† Memorizing is an effort, and involves strain only when the object to be remembered has not produced powerful impressions on the mind. When it has, the remembrance ceases to be difficult: it becomes inevitable.

Now, it is impossible to make powerful impressions on the minds of children by means of verbal symbols only. Children must be addressed through their senses, including the sense of touch, upon which we are all originally dependent for any conviction of reality in the world around us.‡ When words must

* A certain amount of training of reasoning, however, is afforded in the study of arithmetic.

† With the exception of such training of the eye as is obtained from study of maps. I am told, however, that neither teachers nor pupils are expected to draw maps, as is done in Germany.

‡ Dr. Seguin, Sr., has published a remarkable study of the effect which may be produced even on an idiot brain by systematic training of the sense of touch. In Professor Adler's Workingman's School, handiwork training is adopted as an essential part of a mental curriculum.

be used apart from things or pictures, they should certainly first be employed by the mouth of the teacher before the child is sent to find them in a book. The difference between teaching children orally, and teaching them by means of books, may be compared to that which exists between nourishing a baby at the breast or feeding it on condensed and dead milk. A child does not read a book as an adult does, and few persons take the trouble to detect the grotesque effect which may really be produced on his mind by the phrases he glibly professes to understand. My personal experience in the professional education of adults has shown me an extraordinary prevalence of the habit of reading words without any distinct idea of their meaning—a habit fatal to intellectual integrity. Yet this slipshod habit is largely fostered by the attempt to educate children in huge droves at our public schools.

It seems to me singular that the subject of ethical education in the public schools is for the moment so entirely left out of sight. The somewhat absurd squabbles over the reading of the Bible serve rather to emphasize a tenacious adherence to a name which conceals a real indifference to the thing. Yet surely, education in the principles that should govern the mutual relations of human beings might be expected in schools provided by the State, that expects to permanently dominate these relations. Such education would demand a high grade of intelligence and inventiveness on the part of the teacher. It is not enough to enunciate a precept: the end is to create a sentiment. This can only be done by practical exercises in situations combined or created by the teacher. But what a field for rich and varied activity might here be thrown open!

Recognition of the enormous difficulties of the task assigned to the public-school teacher should be followed by willingness to provide higher compensation, when this task is intelligently and conscientiously performed. So much talent, enthusiasm, training, knowledge, and vigor are required for the adequate performance of the teacher's duty, that the supply of really competent teachers must fall far short of the demand. The apparent excess in the supply is only the result of the low standards of attainment and of the mode of appointment. And here I may touch upon a question that, in my opinion, is worthy of consideration. Is it not strange that, in the city of New York, which employs three thousand female teachers, and undertakes to educate many thousands of female children, there are

no women in the Board of Education or among the school trustees? Not only the financial management, but the inspection of the schools, the appointment of the teachers, the scaling of their salaries, their promotions,—everything connected with their discipline as well as with that of the children,—is in the hands of men, not teachers, not educators, but generally politicians. The same kind of influence as governs the Department of Charities and Corrections rules the Department of Public Education. Is it to be supposed that in this department appointments are always made according to merit, and never by favor?

The London School Board, which has done such remarkable work in the last few years, contains many women, sitting side by side in council with some of the most distinguished men of England. Women of intelligence and leisure can certainly find no better occupation for both than in such wide and thorough study of the principles of education as should fit them for the responsible position of trustees and inspectors of the schools. Teachers who have spent years in faithful service should have the opportunity to bring their practical experience to bear on the discussions of the Board of Education. The fact that women are restricted in the exercise of political rights and influence should be rather an advantage than otherwise. It might be hoped that they would thus tend to counterbalance the influence of political motives, which, it is said, do now not unfrequently sway the decisions of men; and in those bodies presumably removed from political influence,—as the Faculty of Professors at the Normal College,—it seems, to an outsider, at least, perfectly incredible that the line of promotion should not be open to long-tried women teachers, as well as to men.

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